

CLAIMS:

1. A venting device adapted to be sealingly received in an opening of a drum, the device comprising:

a body having a pair of opposing sides and defining a plurality of vent passages, each vent passage having an opening at each of the pair of opposing sides and extending through the body, the vent passages being spaced apart and arranged around a center portion of the body;

a membrane structure covering the openings of the vent passages on one of the pair of opposing sides of the body, the membrane structure being sealingly affixed to the body portion in an outer sealing band surrounding the openings of the vent passages and in least one cross sealing band extending across the membrane structure; and

a protective structure attached to the body and positioned over the membrane structure.

2. The venting device of claim 1, wherein the membrane structure includes a membrane layer and a backing layer.

3. The venting device of claim 2, wherein the membrane layer comprises a fluoropolymer material.

4. The venting device of claim 3, wherein the fluoropolymer material is PTFE.

5. The venting device of claim 2, wherein the membrane layer has a thickness of about 0.002 inch.

6. The venting device of claim 1, wherein the protective structure is a frusto-conical or bowl shaped protective cap.

7. The venting device of claim 6, wherein the protective cap has a drain opening and a plurality of vent openings defined therein.

8. The venting device of claim 1, wherein the membrane structure is further sealingly affixed to the body portion at an inner sealing area.

9. The venting device of claim 8, wherein the at least one cross sealing band extends between the outer sealing band and the inner sealing area.

10. A drum for containing a liquid, comprising:

    a bottom structure, a top structure, and a wall together defining an enclosure, the enclosure having at least one bunghole defined therein; and

    a closure sealingly engaged in the at least one bunghole, the closure including a body portion having a pair of opposing sides and defining a plurality of vent passages, each vent passage having an opening at each of the pair of opposing sides and extending through the body, the vent passages being spaced apart and arranged around a center

portion of the body, the closure further including a membrane structure covering the openings of the vent passages on one of the pair of opposing sides of the body, the membrane structure being sealingly affixed to the body portion in an outer sealing band surrounding the openings of the vent passages and in least one cross sealing band extending across the membrane structure.

11. The drum of claim 10, wherein the wall is generally cylindrical.
12. The drum of claim 10, further comprising a protective structure attached to the body portion and positioned over the membrane structure.
13. The drum of claim 10, wherein the protective structure is a frusto-conical or bowl shaped protective cap.
14. The venting device of claim 13, wherein the protective cap has a drain opening and a plurality of vent openings defined therein.
15. The venting device of claim 10, wherein the membrane structure is further sealingly affixed to the body portion at an inner sealing area.
16. The venting device of claim 15, wherein the at least one cross sealing band extends between the outer sealing band and the inner sealing area.

17. The venting device of claim 10, wherein the membrane structure includes a membrane layer and a backing layer.

18. The venting device of claim 17, wherein the membrane layer comprises a fluoropolymer material.

19. The drum of claim 18, wherein the fluoropolymer material is PTFE.

20. The drum of claim 18, wherein the membrane layer has a thickness of about 0.002 inch.

21. A venting device adapted to be sealingly received in an opening of a drum, the device comprising:

a body having a pair of opposing sides and defining a plurality of vent passages, each vent passage having an opening at each of the pair of opposing sides and extending through the body, the vent passages being spaced apart and arranged around a center portion of the body;

membrane means covering the openings of the vent passages on one of the pair of opposing sides of the body, the membrane means being sealingly affixed to the body portion in an outer sealing band surrounding the openings of the vent passages and in least one cross sealing band extending across the membrane structure; and

protective means attached to the body and positioned over the membrane structure.

22. The venting device of claim 21, wherein the membrane means comprises a membrane structure including a membrane layer and a backing layer.

23. The venting device of claim 22, wherein the membrane layer comprises a fluoropolymer material.

24. The venting device of claim 23, wherein the fluoropolymer material is PTFE.

25. The venting device of claim 23, wherein the membrane layer has a thickness of about 0.002 inch.

26. The venting device of claim 21, wherein the membrane means is further sealingly affixed to the body portion at an inner sealing area.

27. The venting device of claim 26, wherein the at least one cross sealing band extends between the outer sealing band and the inner sealing area.

28. The venting device of claim 22, wherein the protective means is spaced apart from the membrane means by at least about 0.050 inch.

29. The drum of claim 22, wherein the protective means is a frusto-conical or bowl shaped protective cap.
30. The venting device of claim 29, wherein the protective cap has a drain opening and a plurality of vent openings defined therein.